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REPORT OF THE
PREOPERATIONAL SURVEY OF THE PRELIMINARY
PROGRAM FOR THE FIELD COLLECTION OF SAMPLES
AT RESERVOIR F, ROCKY MOUNTAIN ARSENAL,
COLORADO, 28-30 JUNE 1977

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CHEMICAL DEMILITARIZATION AND INSTALLATION RESTORATION
ABERDEEN PROVING GROUND, MD 21010

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| 12a. DISTRIBUTION/AVAILABILITY STATEMENT APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED | | | 12b. DISTRIBUTION CODE | |
| 13. ABSTRACT (Maximum 200 words) THE RESERVOIR F SAMPLING PROGRAM PREOPERATIONAL SURVEY WAS CONDUCTED IN ACCORDANCE WITH THE STANDARD PROCEDURES OF PROJECT MANAGER'S OFFICE TO ASSURE THAT PROGRAMS ESTABLISHED UNDER THE JURISDICTION OF THE PROJECT MANAGER'S OFFICE CONFORM TO APPROVED SAFETY CRITERIA AND CAN ADEQUATELY PERFORM INTENDED OPERATIONAL FUNCTIONS. ONLY UPON POSITIVE RECOMMENDATION BY THE PREOPERATIONAL SURVEY CHAIRMAN AND APPROVAL BY THE PROJECT MANAGER MAY THE ACTUAL RESERVOIR F SAMPLING PROGRAM BEGIN. THE PREOPERATIONAL SURVEY CONSISTED OF WITNESSING THE PREPARATION OF EQUIPMENT AND MATERIAL FOR USE ABOARD THE FLOATING WORK PLATFORM, THE DEMONSTRATION OF THE LAUNCHING, PROPELLING & DOCKING OF THE CRAFT, THE DEMONSTRATION OF THE WATER SAMPLING TECHNIQUE AND THE EMERGENCY COMMUNICATIONS SYSTEM. THE STANDING OPERATING PROCEDURE & PRELIMINARY SAMPLING PLAN WERE REVIEWED. AN OVERALL PHYSICAL INSPECTION OF THE WORK PLATFORM AND EQUIPMENT WAS ALSO PERFORMED TO EVALUATE ANY OPERATIONAL AND SAFETY DEVIATIONS FROM ACCEPTABLE | | | | |
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I. PURPOSE

The Reservoir F Sampling Program Preoperational Survey was conducted in accordance with the standard procedures of the Project Manager's Office to assure that programs established under the jurisdiction of the Project Manager's Office conform to approved safety criteria and can adequately perform intended operational functions. Only upon positive recommendation by the Preoperational Survey Chairman and approval by the Project Manager may the actual Reservoir F Sampling Program begin.

II. BACKGROUND

Carl Loven, Chief, Process Development and Evaluation Division, RMA, Dennis Wynn, OPM CDIR, and Lawrence Smith, OPM CDIR mutually agreed upon the timing of the preoperational survey during telephone conversations the week of 20 June 1977. DRCPM-DR-T message 291630Z June 1977, Subject: Basin F Sampling Program, formally notified the Commander, RMA of the intent of the Project Manager's Office to conduct the survey prior to issuance of approval to initiate the actual Reservoir F Sampling Program. An entrance interview was held with COL Byrne upon arrival at RMA on 27 June 1977. An exit interview was held with CPT Leister on 1 July 1977; copies of this report were given to all personnel attending.

III. GENERAL

The preoperational survey consisted of witnessing the preparation of equipment and material for use aboard the floating work platform, the demonstration of the launching, propelling and docking of the craft, the demonstration of the water sampling technique and the emergency communications system. The Standing Operating Procedure and Preliminary Sampling Plan were reviewed. An overall physical inspection of the work platform and equipment was also performed to evaluate any operational and safety deviations from acceptable criteria.

IV. COMMENTS AND RECOMMENDATIONS

1. Comment - Several items of necessary equipment were not yet assembled at the work area. These items included the following:

- (a) fiberglass boat for reaching shore if work platform motor fails.
- (b) thermistor digital thermometer.
- (c) range rod.
- (d) 2" diameter pipe with threaded caps for alternate method of sediment collection.

Recommendation - Obtain that equipment available for use and transport to the work site. Fabricate equipment not available or substitute similar items from equipment located at RMA.

2. Comment - Hose used for drawing water/sediment sample aboard the work platform for collecting the sample was deemed inadequate since it is flexible and accurate depth of sample taken could not readily be determined.

Recommendation - Fabricate a nonflexible length of plastic pipe to attach to a flexible hose connected to the pump for use in lieu of the continuous flexible sample intake line. Mark depth measurements legibly and permanently on the solid pipe.

3. Comment - The sample intake and discharge lines were connected to the pump by threaded couplings. The positioning of the pump would allow leaks which may develop at the threaded couplings to spray or drip on personnel attending the pump or to spray or drip onto the platform decking where personnel kneel while taking samples.

Recommendation - Attach the couplings permanently with a leak proof seal, encase the pump within a splash shield or reposition the pump so leaks would be directed over the side of the craft.

4. Comment - Operation of the 9HP motor to propel the work platform demonstrated several problems:

(a) the positioning of the motor on the motor support bracket allows the propeller to rest so low in the water that it drags bottom near the shore.

(b) the operator of the motor is occasionally splashed with Reservoir F liquids.

(c) No guard rail is provided at the end of the platform where the motor operator is located.

Recommendation - Redesign or adjust the motor support bracket to raise the motor. Design a decking or splash shield around the motor which reduces operator contact with Reservoir F liquid thrown by the motor. Provide a safety barrier to assure the motor operator will not inadvertently fall overboard while kneeling at the motor.

5. Comment - Water sample bottle labels, marker buoy labels, and accompanying log book or data sheets necessary to record adequate sample location information have not been completely developed.

Recommendation - Develop and utilize necessary labeling and recording techniques to assure adequate data is available to determine precise sample locations.

6. Comment - The Standing Operating Procedure, SARRM-IR-P2, developed for the preliminary sampling operation is recognized by developing personnel as being inaccurate and lacking detail in some areas. Specific items already noted include:

- (a) inaccurate instructions for use of fiberglass boat.
- (b) incomplete requirement for coworker to remain at the launching site.
- (c) inaccurate requirement for oxygen, air packs, eyewash solution and chemical burn solution to be carried on the floating work platform.
- (d) inaccurate requirement for only one anchor.
- (e) incomplete requirements for when to wear protective masks.
- (f) absence of emergency notification procedures.
- (g) incomplete description of Reservoir F fluid hazards.
- (h) absence of sample logging instructions.
- (i) inaccurate reference to tying the raft to the marker buoy.
- (j) inaccurate reference to operators checking depth against a bottom profile chart.
- (k) incomplete instructions on transferring sediment collected from alternate sampling method to sample bottle.
- (l) incomplete method for checking radios.
- (m) absence of instructions for determining mask canister life.
- (n) inaccurate reference to a built-in sampling pump purging mechanism.

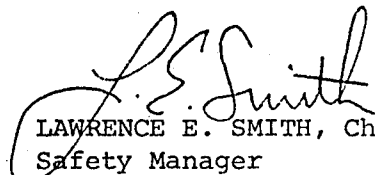
Recommendation - Recognize and have operators personally resolve in their minds the SOP shortcomings. Add to the preliminary sampling program objectives the further evaluation of the existing SOP. Provide at the end of the preliminary sampling program a complete SOP upgraded to reflect now known shortcomings and lessons learned during the preliminary sampling so that future more extensive sampling will start with a complete and proven SOP. It is believed the short preliminary sampling program and the few number of people involved plus the current knowledge of SOP shortcomings does not constitute a hazardous condition. Revision of the SOP may await additional evaluation during the sample program.

V. CONCLUSION

It is concluded that the operation for the Preliminary Program of the Field Collection of Samples at Reservoir F has satisfactorily demonstrated the ability to operate capably and safely provided the recommendations contained herein are accomplished.

Upon completion or resolving of the recommendations above, verbal notification should be made to OPM CDIR followed by confirmation in writing of actual actions taken. At that time verbal authority, followed in writing will be given to commence the Reservoir F sampling program.

VI SIGNATURE


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